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## METHOD AND CIRCUITS FOR ENCODING AN INPUT PATTERN USING A NORMALIZER AND A CLASSIFIER

## ABSTRACT

Let us consider a plurality of input patterns having an essential characteristic in common but which differ on at least one parameter (this parameter modifies the input in but pattern some extent not this essential characteristic for a specific application). During the learning phase, each input pattern is normalized in a normalizer, before it is presented to a classifier. If not recognized, it is learned, i.e. the normalized pattern is stored in the classifier as a prototype with its category associated thereto. From a predetermined reference value of that parameter, the normalizer computes an element related to said parameter which allows to set the normalized pattern from the input pattern and vice versa to retrieve the input pattern from the normalized pattern. As a result, all these input patterns are represented by the same normalized pattern. The above method and circuits allow to reduce the number of required prototypes in the classifier, improving thereby its response quality.

FIG. 7